WHAT IS CLAIMED IS:

1. A method for manufacturing a discharge tube, the discharge tube comprising a discharge part, a sealing part formed at an end of the discharge part, and an electrode provided in the discharge part, the method comprising:

inserting an electrode body having the electrode into a portion to be the sealing part that is adjacent to a portion to be the discharge part of a transparent insulating tube serving as a material for the discharge tube; and

sealing the portion to be the sealing part by heating and softening with a combination of a laser beam and a gas burner, thus forming the sealing part.

2. The method for manufacturing a discharge tube according to claim 1, wherein an end of the portion to be the sealing part on a side of the portion to be the discharge part is sealed by heating and softening with the laser beam, and a portion other than the end of the portion to be the sealing part on the side of the portion to be the discharge part is sealed by heating and softening with the gas burner.

3. The method for manufacturing a discharge tube according to claim 2, wherein, immediately before or after a completion of sealing the end of the portion to be the sealing part on the side of the portion to be the discharge part by heating and softening with the laser beam, a region that is adjacent to the heated and softened region of the portion to be the sealing part starts being heated and softened with the gas burner.

4. The method for manufacturing a discharge tube according to claim 1, wherein the portion to be the sealing part is sealed sequentially from an end on a side of the portion to be the discharge part toward an end on an opposite side of the portion to be the discharge part.

5. The method for manufacturing a discharge tube according to claim 1, wherein the portion to be the sealing part is sealed sequentially from an end on an opposite side of the portion to be the discharge part toward an end on

a side of the portion to be the discharge part.

6. The method for manufacturing a discharge tube according to claim 1, wherein at least a part of a region to be heated and softened with the laser beam and a part of a region to be heated and softened with the gas burner overlap each other in the portion to be the sealing part.

7. A discharge lamp comprising a discharge tube obtained by the method according to claim 1.

8. A discharge lamp comprising:
a discharge tube obtained by the method according to claim 1, and
a reflector.

9. A discharge lamp comprising:
a discharge tube obtained by the method according to claim 1,
an outer tube surrounding the discharge tube, and
a lamp base provided at an end of the outer tube.